

WHAT IS CLAIMED IS:

- 5 1. <sup>Sub  
A17</sup> A data compressing apparatus for generating code data from a character train stream constructed by a document including tags, comprising:
- 5 a tag information separating unit for separating the identified tag from said character train stream and outputting as tag information;
- 10 a tag code replacing unit for arranging a tag code for identification to a position of the character train stream in which the tag was separated by said tag information separating unit; and
- 15 a character train coding unit for coding the character train stream including the tag code outputted from said tag code replacing unit and outputting a code stream.
- 20 2. <sup>Sub  
B17</sup> An apparatus according to claim 1, wherein said tag code replacing unit arranges a predetermined fixed code as said tag code to the position of the character train stream in which the tag was separated.
- 25 3. An apparatus according to claim 1, wherein said tag code replacing unit arranges a tag code indicative of an appearing order of the tag separated by said tag information separating unit to the position of the character train stream in which the tag was separated.

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4. An apparatus according to claim 1, further comprising:

a tag information storing unit for storing the tag information separated by said tag information separating unit;

a code storing unit for storing the code data formed by said character train coding unit; and

a code switching unit for selecting the tag information stored in said tag information storing unit and the code data stored in said code storing unit and outputting the selected tag information or code data.

5. An apparatus according to claim 1, wherein said character train coding unit comprises:

a dictionary storing unit for storing a dictionary in which a character train serving as a processing unit when compressing has been registered; and

a character train comparing unit for comparing a partial character train in the character train stream from said tag code replacing unit with the registration character train in said dictionary storing unit, thereby detecting a partial character train which coincides with said registration character train, allocating a predetermined code every said detected partial character train, and outputting a resultant character train.

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6. An apparatus according to claim 1, further comprising a tag information compressing unit for compressing the tag information separated by said tag information separating unit.

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7. An apparatus according to claim 1, further comprising:

10 a tag dictionary storing unit for storing a dictionary in which a tag character train in the tag information serving as a processing unit when compressing has been registered; and

15 a tag character train comparing unit for comparing the partial character train of the character train stream included in the tag information separated by said tag information separating unit with the registration character train in said tag dictionary storing unit, thereby detecting a partial character train which coincides with said registration character train, allocating a predetermined code every said  
20 detected partial character train, and outputting a resultant character train.

8. An apparatus according to claim 4, further comprising a tag position detecting unit for detecting  
25 a position of the tag in the code data formed by said character train coding unit,

and wherein both the tag information separated by

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said tag information separating unit and designation information of the tag position detected by said tag position detecting unit are stored in said tag information storing unit.

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9. An apparatus according to claim 8, wherein said tag position detecting unit detects the code amount from the head of a document or a specific tag and stores it together with the tag information into said tag information storing unit.

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10. A data reconstructing apparatus for reconstructing character train data from a code stream including tag information separated from a character train stream of a document including tags and code data obtained by encoding a character train stream in which a tag code has been arranged at a position of the separated tag, comprising:

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a tag information separating unit for separating said tag information and said code data from said code stream;

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a tag information storing unit for storing the tag information separated by said tag information separating unit; and

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a character train reconstructing unit for reconstructing the character train data including the character train and the tag code from said code data

and, thereafter, replacing said tag code by the tag information in said tag information storing unit.

11. An apparatus according to claim 10, wherein said  
5 character train reconstructing unit comprises:

a dictionary storing unit for storing a dictionary in which a reconstruction character train corresponding to a code of the character train serving as a processing unit when reconstructing has been  
10 registered;

a character train comparing unit for separating a code of the character train serving as a reconstruction unit from said code stream and reconstructing the original character train with reference to said  
15 dictionary storing unit; and

a character train replacing unit for replacing the tag code reconstructed by said character train comparing unit by the tag information in said tag information storing unit.  
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12. An apparatus according to claim 10, further comprising a tag information reconstructing unit for reconstructing compression data of the tag information stored in said tag information storing unit.  
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13. An apparatus according to claim 10, further comprising:

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5 a tag dictionary storing unit for storing a  
dictionary in which a reconstruction character train  
corresponding to a code of a tag character train  
serving as a processing unit when reconstructing has  
been registered; and

10 a tag character train comparing unit for  
separating a code of the tag character train serving as  
a reconstruction unit from the tag information  
separated by said tag information separating unit and  
reconstructing the original tag character train with  
reference to said dictionary storing unit.

15 14. A data compressing method of generating code data  
from a character train stream constructed by a document  
including tags, comprising:

a tag information separating step of separating  
the identified tag from said character train stream and  
outputting as tag information;

20 a tag code replacing step of arranging a tag code  
for identification to a position of the character train  
stream in which the tag was separated in said tag  
information separating step; and

25 a character train coding step of coding the  
character train stream including the tag code outputted  
from said tag code replacing step and outputting a code  
stream.

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